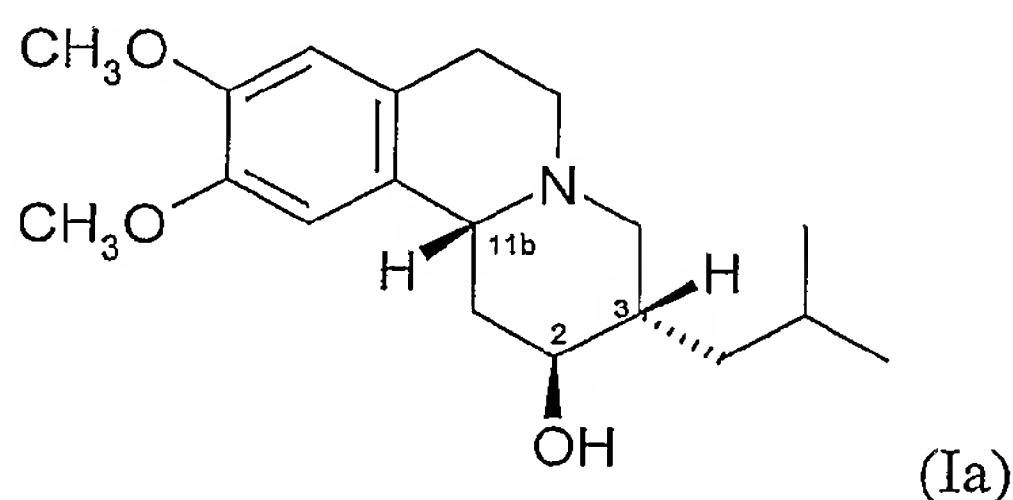


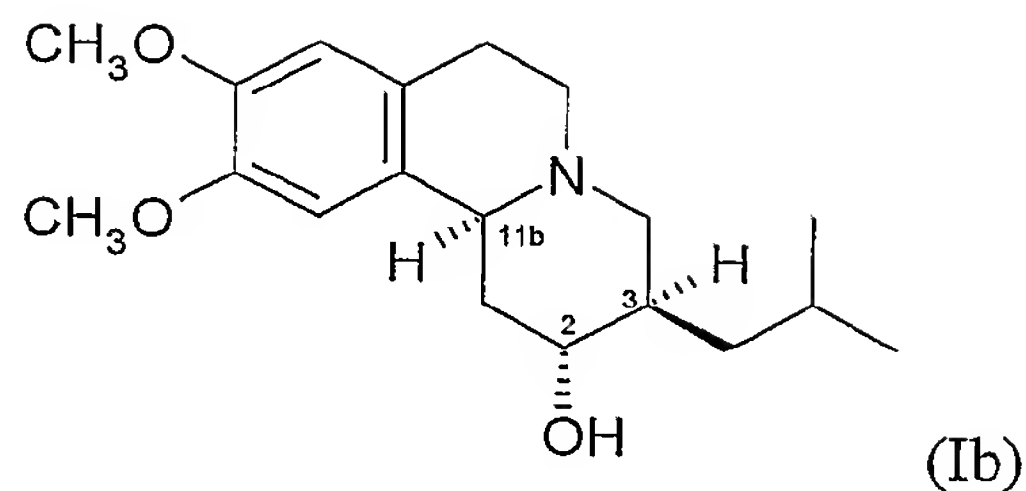
**CLAIMS**

1. 3,11b-*cis*-dihydrotetrabenazine.
2. 3,11b-*cis*-dihydrotetrabenazine in substantially pure form, for example at an isomeric purity of greater than 90%, typically greater than 95% and more preferably greater than 98%. 5
3. 3,11b-*cis*-dihydrotetrabenazine according to claim 1 or claim 2 which is in a (+)-isomeric form.
4. A composition comprising 3,11b-*cis*-dihydrotetrabenazine substantially free of 3,11b-*trans*-dihydrotetrabenazine.
- 10 5. A composition comprising 3,11b-*cis*-dihydrotetrabenazine and containing less than 5% of 3,11b-*trans*-dihydrotetrabenazine, preferably less than 3% of 3,11b-*trans*-dihydrotetrabenazine, and more preferably less than 1% of 3,11b-*trans*-dihydrotetrabenazine.
6. A composition according to claim 4 or claim 5 wherein the 3,11b-*cis*-dihydrotetrabenazine is a (+)-isomer. 15
7. The 2*S*,3*S*,11*bR* isomer of 3,11b-*cis*-dihydrotetrabenazine having the formula (Ia):

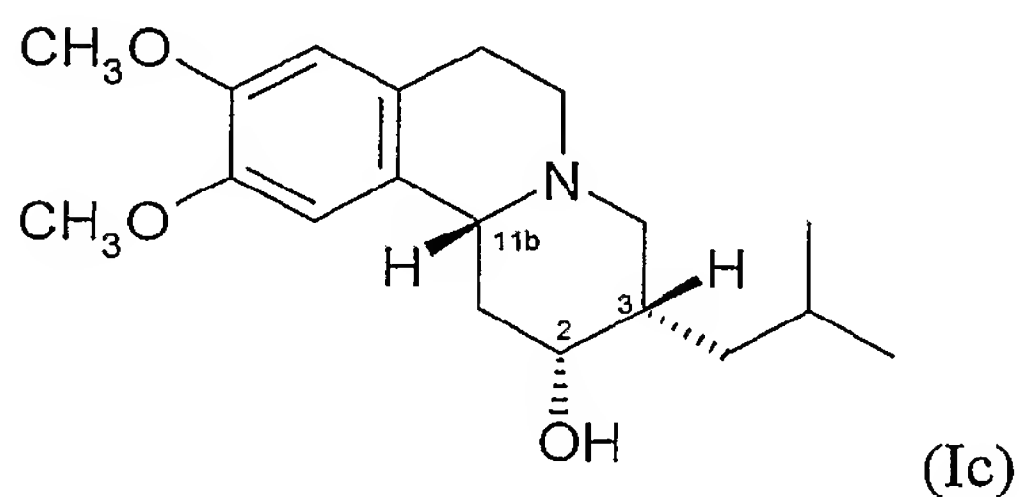


8. The 2*R*,3*R*,11*bS* isomer of 3,11b-*cis*-dihydrotetrabenazine having the formula (Ib): 20

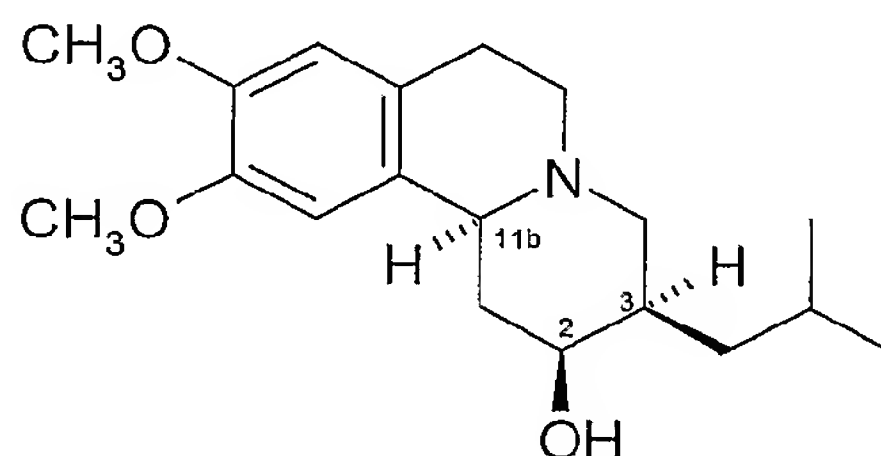
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9. The 2*R*,3*S*,11*bR* isomer of 3,11*b*-*cis*-dihydrotetrabenazine having the formula (Ic):



- 5 10. The 2*S*,3*R*,11*bS* isomer of 3,11*b*-*cis*-dihydrotetrabenazine having the formula (Id):

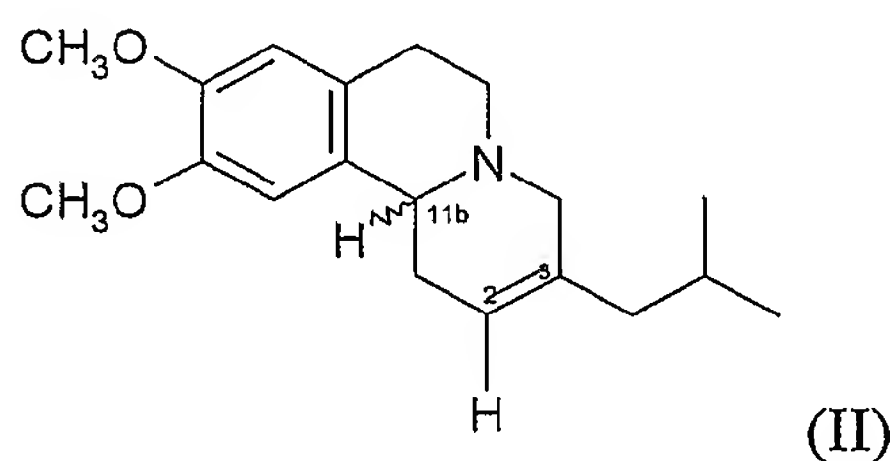


11. A 3,11*b*-*cis*-dihydrotetrabenazine isomer having an ORD  $[\alpha_D]$  value of  $-114.6^\circ$  when measured in methanol at  $21^\circ\text{C}$ .
- 10 12. A 3,11*b*-*cis*-dihydrotetrabenazine isomer having an ORD  $[\alpha_D]$  value of approximately  $+123^\circ$  when measured in methanol at  $21^\circ\text{C}$ .
13. A 3,11*b*-*cis*-dihydrotetrabenazine isomer having an ORD  $[\alpha_D]$  value of  $+150.9^\circ$  when measured in methanol at  $21^\circ\text{C}$ .
14. A 3,11*b*-*cis*-dihydrotetrabenazine isomer having an ORD  $[\alpha_D]$  value of  $-145.7^\circ$  when measured in methanol at  $21^\circ\text{C}$ .
- 15

15. A dihydrotetrabenazine isomer having the spectroscopic characteristics set out in Table 1 herein and the chromatographic and optionally the ORD characteristics set out in Table 3 herein.
- 5 16. A dihydrotetrabenazine isomer having the spectroscopic characteristics set out in Table 2 herein and the chromatographic and optionally the ORD characteristics set out in Table 4 herein.
17. Dihydrotetrabenazine isomer A having the spectroscopic characteristics set out in Table 1 herein, the chromatographic characteristics set out in Table 3 herein, and having laevorotatory optical activity.
- 10 18. Dihydrotetrabenazine isomer B having the spectroscopic characteristics set out in Table 1 herein, the chromatographic characteristics set out in Table 3 herein, and having dextrorotatory optical activity.
- 15 19. Dihydrotetrabenazine isomer C having the spectroscopic characteristics set out in Table 2 herein, the chromatographic characteristics set out in Table 4 herein, and having dextrorotatory optical activity.
20. Dihydrotetrabenazine isomer D having the spectroscopic characteristics set out in Table 2 herein, the chromatographic characteristics set out in Table 4 herein, and having laevorotatory optical activity.
- 20 21. A dihydrotetrabenazine as defined in any one of the preceding claims in the form of a free base.
22. A dihydrotetrabenazine as defined in any one of claims 1 to 20 in the form of an acid addition salt.
23. A dihydrotetrabenazine according to claim 22 wherein the salt is a methane sulphonate salt.
- 25 24. A dihydrotetrabenazine as defined in any one of the preceding claims for use in medicine or therapy, for example in the treatment of hyperkinetic movement disorders such as Huntington's disease, hemiballismus, senile

chorea, tic, tardive dyskinesia and Tourette's syndrome, or the treatment of depression.

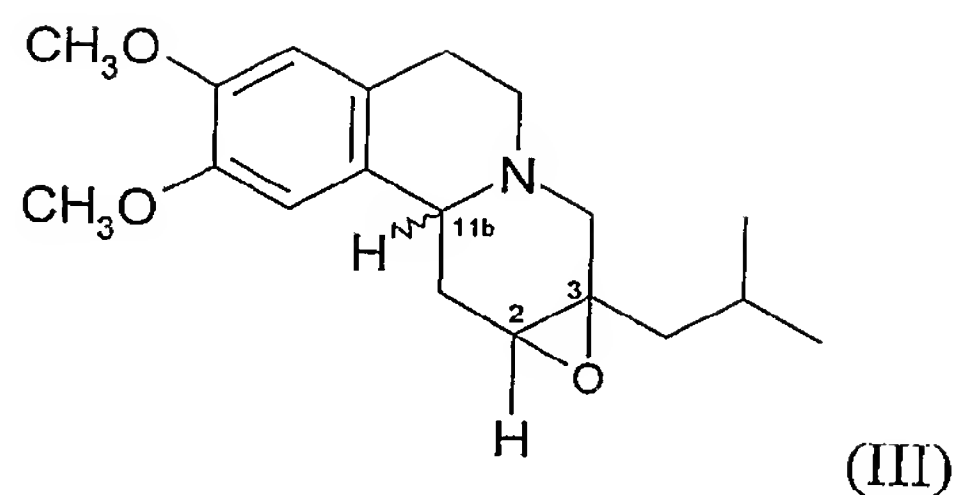
25. A pharmaceutical composition comprising a dihydrotetrabenazine as defined in any one of claims 1 to 23 and a pharmaceutically acceptable carrier.
26. The use of a dihydrotetrabenazine as defined in any one of claims 1 to 23 for the manufacture of a medicament for the treatment of hyperkinetic movement disorders such as Huntington's disease, hemiballismus, senile chorea, tic, tardive dyskinesia and Tourette's syndrome, or the treatment of depression.
27. A method for the prophylaxis or treatment of a hyperkinetic movement disorder such as Huntington's disease, hemiballismus, senile chorea, tic, tardive dyskinesia and Tourette's syndrome, or the treatment of depression, in a patient in need of such prophylaxis or treatment, which method comprises the administration of an effective prophylactic or therapeutic amount of a dihydrotetrabenazine as defined in any one of claims 1 to 23.
28. A process for preparing a dihydrotetrabenazine as defined in any one of claims 1 to 23, which process comprises the reaction of a compound of the formula (II):



with a reagent or reagents suitable for hydrating the 2,3-double bond in the compound of formula (II) and thereafter where required separating and isolating a desired dihydrotetrabenazine isomer form .

29. A process for preparing a dihydrotetrabenazine as defined in any one of claims 1 to 23, which process comprises subjecting a compound of the formula (III):

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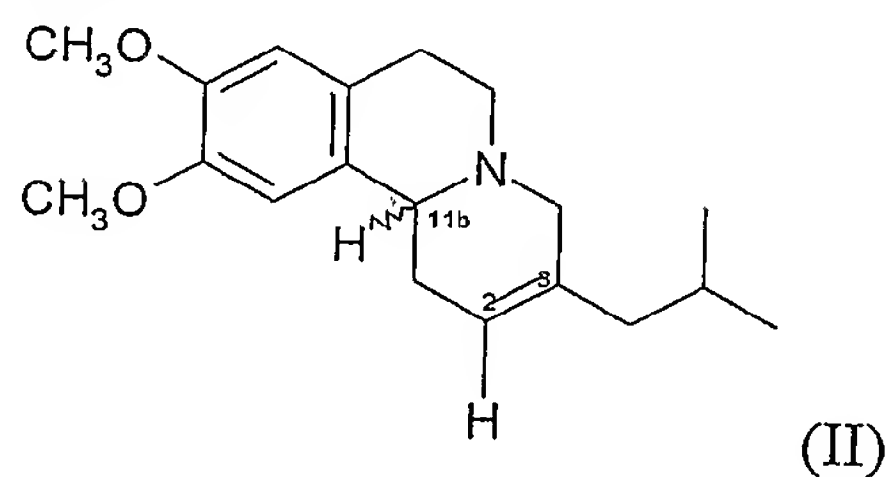


to conditions for ring-opening the 2,3-epoxide group in the compound of the formula (III), and thereafter where required separating and isolating a desired dihydrotetrabenazine isomer form.

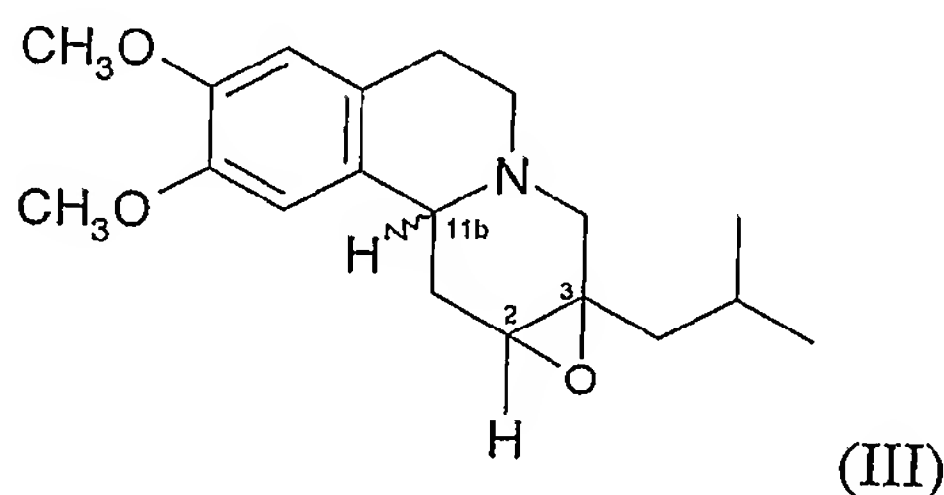
- 5 30. A process for preparing a compound of the formula (III) as defined in claim 29 which process comprises reacting an alkene compound of the formula (II) as defined in claim 27 with an oxidising agent (such as a peroxy acid) suitable for forming an epoxide group.

- 10 31. A process for preparing a compound of the formula (II) as defined in claim 28 which process comprises dehydrating a 3,11-*trans*-dihydrotetrabenazine with a dehydrating agent such as a phosphorus halide or phosphorus oxyhalide.

32. A compound of the formula (II):



- 15 33. A compound of the formula (III):



34. A Mosher's acid ester of a compound as defined in any one of claims 1 to 23.